

REMARKS

Claims 1-10 are pending. Claims 1-9 have been amended. Especially in view of the amendments to claim 9 and the remarks below, Applicant respectfully requests the rejections be withdrawn and the claims be allowed. Applicant reserves the right, however, to pursue the original claims and other claims in this and other applications.

Claims 1, 2 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2003/0016944 to Kato et al. ("Kato") in view of U.S. Patent No. 2003/0227976 to Okada et al. ("Okada"). The rejection is respectfully traversed.

Claim 1 relates to an AV network system that includes a user interface system, a receiver, an encoder, and a decoder. When the user interface system receives an instruction to switch the broadcast signal channel, the encoder encodes a switched channel analog broadcast signal received from the receiver to initially create MPEG data made up of one Group of Pictures ("GOP") consisting of one I picture. The decoder then decodes this MPEG data and an output section outputs an image signal for a still picture.

An important aspect of the invention of claim 1 is that the encoder encodes the signal to create MPEG data "made up of one GOP consisting of one I picture." The single GOP created by the encoder contains only one I picture, as dictated by the closed-language "consisting of one I picture." This means that the GOP does not contain the B or P pictures ordinarily present in an MPEG GOP. By encoding to create MPEG data that includes a GOP consisting of only one I picture, as opposed to a normal GOP consisting of one or several I pictures in addition to several P and/or B pictures, a still picture can be quickly displayed after a channel is switched. It is the production of this truncated, single-picture GOP and the display of the still image that produces the desired effect: reducing the time lag between switching channels and output of an image to the display. Neither Kato nor Okada disclose this aspect of claim 1.

Kato does not disclose an encoder encoding a signal to create MPEG data “made up of one GOP consisting of one I picture” and the Office Action does not contend otherwise. Office Action at 3.

Okada does not disclose an encoder encoding a signal to create MPEG data “made up of one GOP consisting of one I picture.” Okada does contain a general description of the typical MPEG format. Okada at [0048]-[0062]. As noted in the Office Action, Okada describes that “In MPEG-2 the number of I pictures allotted within each GOP is extremely small. For example, there is one frame at the most among picture of 15 to 30 frames that constitute the GOP.” Okada at [0062]. Okada, however, contemplates that the GOP also contains P and/or B pictures which make up the other 14 to 29 frames of the GOP. See figs. 3, 10 and 11 (depicting sample data streams with I and P pictures). In fact, Okada specifically states that “at least one P picture is required within the GOP.” Okada at [0060]. So while Okada does disclose MPEG data made up of a GOP comprising a single I picture as well as B or P pictures, it does not disclose MPEG data made up of “one GOP consisting of one I picture.”

Another important aspect of claim 1 is that an output section outputs an image signal for a “still picture” decoded from the MPEG data made up of one GOP consisting of one I picture. Neither Kato nor Okada disclose this aspect of claim 1.

Kato discloses the output of video and audio signals, but not a “still picture.” Kato at [0012]-[0036]. Kato does not mention still images at all.

Okada only discloses the output of continuously-moving video segments. See figs. 10, 11. Okada’s motion compensated prediction unit produces multiple images, each of which are stored in a frame buffer and outputted to the display apparatus sequentially. Okada at [0046]. The image decoding unit generates the reproduced image data sequence continuously in a time-series manner. Okada at [0047]. Thus, the Okada process is a best-efforts reproduction that displays a series of partial pictures to temporarily create an incomplete moving image. The invention of claim 1, on the other hand, produces one complete “still picture.”

Neither Kato nor Okada disclose or suggest an encoder that encodes a signal to create MPEG data “made up of one GOP consisting of one I picture.” Additionally, Neither Kato nor Okada disclose or suggest an output section for outputting an image signal for a “still picture” decoded from the GOP consisting of one I picture. For at least these reasons, claim 1 is allowable over the prior art of record. Applicant respectfully requests that the rejection be withdrawn and the claim be allowed.

Claim 2 also contains an encoder that encodes the signal to create MPEG data “made up of one GOP consisting of one I picture,” as well as an output section for outputting an image signal for a “still picture” decoded by the decoder. As explained above, neither element is disclosed or suggested in either Kato or Okada. Thus, claim 2 is allowable for at least the same reasons that claim 1 is allowable. Applicant respectfully requests that the rejection be withdrawn and the claim be allowed.

Claim 9 has been amended. Amended claim 9 relates to an image signal processing method and includes the encoding of a broadcast signal into MPEG form “to initially create MPEG data made up of one GOP consisting of one I picture” and the outputting a decoded image signal for a “still picture.” As explained above, neither the creation of MPEG data made up of “one GOP consisting of one I picture” nor the outputting of a “still picture” is disclosed or suggested in either Kato or Okada. Thus, amended claim 9 is allowable for at least the same reasons that claim 1 is allowable. Applicant respectfully requests that the rejection be withdrawn and the claim be allowed.

Claims 8 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato in view of Okada. This rejection is respectfully traversed.

Claim 8 relates to an AV unit that includes a user interface section for receiving a switching instruction from a user, and an encoder for encoding a broadcast signal in MPEG form to initially create MPEG data made up of “one GOP comprising smaller numbers of pictures than that of before receiving said switching instruction.” An important aspect of claim 8 is that the MPEG

data created by the encoder is made up of “one GOP comprising smaller numbers of pictures” than that of before the switching instruction was received. In this claim, the encoded MPEG data may consist of more than a single I picture, but it must contain a smaller number of pictures than were being produced prior to the switching instruction. This would result in a lag prior to image display that is potentially longer than the system of claim 1, but still shorter than if the normal size GOP was encoded. Neither Kato nor Okada disclose this aspect of claim 8.

Kato does not disclose an encoder that encodes a signal to create MPEG data made up of “one GOP comprising of smaller numbers of pictures than that of before receiving said switching instruction” and the Office Action does not contend otherwise. Office Action at 5.

Okada does not disclose an encoder that encodes a signal to create MPEG data made up of “one GOP comprising of smaller numbers of pictures than that of before receiving said switching instruction.” Okada discloses the general format for MPEG data, which includes a GOP comprising of a small number of I Pictures. Okada at [0062]. It does not, however, disclose changing the number of pictures in the GOP after a switching instruction. Instead, Okada contemplates fixed-size GOPs. Okada contains no disclosure of an encoder that reduces the size of the GOP based on a switching instruction.

Neither Kato nor Okada disclose an encoder that encodes a signal to create MPEG data made up of “one GOP comprising of smaller numbers of pictures than that of before receiving said switching instruction.” For at least this reason, claim 8 is allowable over the prior art of record. Applicant respectfully requests that the rejection be withdrawn and the claim be allowed.

Claim 10 relates to an image signal processing method that includes encoding a signal to initially create MPEG data made up of “one GOP comprising of smaller numbers of pictures than that of before receiving said switching instruction” and also outputting a decoded image signal for a “still picture.” As explained above in reference to claim 8, neither Kato nor Okada disclose an encoder that encodes a signal to create MPEG data made up of “one GOP comprising of smaller numbers of pictures than that of before receiving said switching instruction.” Additionally, as

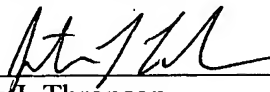
explained above in reference to claims 1, 2 and 9, neither Kato nor Okada disclose outputting a "still picture." For at least these reasons, claim 10 is allowable. Applicant respectfully requests that the rejection be withdrawn and the claim be allowed.

Claims 3-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato in view of Okada further in view of U.S. Patent No. 5594491 to Hodge et al. ("Hodge"). Claims 3, 6 and 7, which depend from claim 2, are allowable for at least the same reasons that claim 2 is allowable. Claim 4 depends from claim 3, and is allowable for at least the same reasons that claim 3 is allowable. Claim 5 depends from claim 4, and is allowable for at least the same reasons that claim 4 is allowable. Applicant respectfully requests that the rejections be withdrawn and the claims be allowed.

In view of the above remarks, Applicant believes the pending application is in condition for allowance. If there are any additional charges in connection with this filing or any subsequent filings (including but not limited to issue fees), the Examiner is respectfully requested and authorized to charge Deposit Account No. 04-1073 therefor under Order No. H1658.0012/P012.

Dated: October 24, 2008

Respectfully submitted,

By 
Mark J. Thronson

Registration No.: 33,082
Jonathan L. Falkler (Agent)
Registration No.: 62,115
DICKSTEIN SHAPIRO LLP
1825 Eye Street, NW
Washington, DC 20006-5403
(202) 420-2200
Attorney/Agent for Applicant